

SAN JOSÉ STATE UNIVERSITY
URBAN AND REGIONAL PLANNING DEPARTMENT
URBP-278: INTRODUCTION TO GIS FOR URBAN PLANNING
SPRING 2025

Instructor	Rick Kos, AICP
Email	richard.kos@sjsu.edu
Office hours	Tuesdays (11:00 a.m. – 1:00 p.m.) and Thursdays (12:30 p.m. – 2:30 p.m.) Appointments strongly preferred. Sign up here: https://goo.gl/pEvVod
Office location	WSQ-218C
Class days/time	Thursdays 3:00 p.m. – 5:45 p.m.
Class meetings	Washington Square Hall, Room 208
Class website	All course materials will be available on Canvas.
Prerequisites	Completion of URBP-275G (Geographic Information Systems Overview) is highly recommended, though not required
Units	4 units

Course Catalog Description

Examination of geographic information systems (GIS) applications to urban and regional planning topics.

Course Overview

Geographic Information Systems, GIS, is a rapidly evolving technology involving the study of the spatial (geographic) location of features on the Earth's surface and the relationships between them. Because the work of urban planners fundamentally involves the study of location and spatial relationships, today's employers increasingly expect graduates of urban planning programs to possess a working knowledge of GIS.

Environmental Systems Research Institute's (Esri) suite of GIS software – ArcGIS Pro in particular – has become the industry standard and is used by a majority of government agencies and private firms engaged in GIS activities. Specifically, employers seek professionals armed with a grasp of geospatial data types (vector, aerial imagery, satellite imagery, geodatabases, etc.), spatial analysis techniques, and GIS project management skills in order to effectively study a host of multi-faceted urban planning topics.

The course strives to provide a balance between the "how-to" of using ArcGIS Pro and the "why" of GIS by explaining the roles GIS technology plays in analyzing local and regional (even global) problems. My primary goal is to ensure that by completing the course you will possess the fundamental GIS skills valued by today's employers. Quite a number of my past students have secured internships and full-time jobs at agencies including the San Francisco Municipal Transportation Agency, the Valley Transportation Authority, and numerous municipal and county planning departments specifically because they demonstrated GIS expertise in their portfolios and during job interviews.

The majority of students that take this elective course typically do not intend to pursue careers dedicated *exclusively* to the use of GIS; rather, they wish to learn just enough about the technology so it can be one of many tools available to them during their urban planning careers. As such, this course emphasizes hands-on

practice with ArcGIS Pro and incorporating real-world geospatial data typically used by urban planners. The course will consist of four primary components:

Module 1. “Going Places with Spatial Analysis” Mini-Course (30% of final course grade)

We will complete an Esri-designed online course over the span of six weeks. You can expect to devote roughly 4-5 hours of self-paced work on the course per week. By completing this mini-course, you will earn a certificate that you can add to your resume and social media platforms. We will use class time to review the concepts covered in the course:

- Geography Matters
- Understanding and comparing places
- Determining how places are related
- Finding the best locations and paths
- Detecting and quantifying patterns
- Making predictions

Module 2. Using ArcGIS for a Los Angeles River Planning Project (40% of final course grade)

Using a well-designed textbook as a guide, you will model a comprehensive, GIS-based planning approach for the future of the Los Angeles River. You will learn the specific steps necessary to navigate ArcGIS Pro, acquire and manage geographic data sets, develop effective cartographic techniques, and query geospatial data to answer typical planning-related questions. To practice your new skills, supplemental exercises designed by me will give you a chance to use real geospatial data from Bay Area cities, “warts and all”, to learn how to overcome typical problems encountered by GIS practitioners.

Module 3. Independent Final Project (professional engagement unit; 25% of final course grade)

In this third and final part of the course you will develop, execute, and present an independent final GIS project. This will help you properly frame an urban planning issue, analyze related geospatial datasets, develop high-quality GIS maps to illustrate the issue, and present your findings to the class. A key objective of the final project is to provide you with a portfolio piece to present to current and future employers as evidence of your GIS abilities. I am continually impressed by the work that students have produced for their final projects!

Active and Consistent Participation in Class (5% of final course grade)

Please bring your fullest measure of energy, dedication, engagement and participation to each class meeting. This aspect of the course grade will be measured by my observations of your (hopefully) consistent, active, well-prepared, and measurable engagement in lectures and reading discussions, small team tasks, and class presentations. At the end of the semester, you will submit a short reflection report as one aspect of this grading criterion.

As we work together over the next few months, you will be encouraged to think about integrating geospatial analysis into your other San José State coursework. There are many avenues for assistance and to accelerate your understanding of GIS: in-class exercises and personal guidance from me, at least three office hours per week, and the ability to reach me via e-mail (I typically reply to clearly worded messages very quickly). I’ve also hired a terrific student assistant to help you. There is a lot of work to complete in this course, but I’m here to help you succeed – and we’ll have some fun, too. Ready? Let’s go!

Course Learning Objectives

Upon successful completion of the course, you will be able to:

1. Describe how contemporary urban planners use ArcGIS Pro as a tool for the analysis and display of quantitative data such as demographic information from the US Census Bureau
2. Utilize the core components and functionality of ArcGIS Pro
3. Prepare professional-grade maps with all necessary cartographic elements
4. Conduct attribute and spatial queries with geospatial datasets
5. Conceptualize, design, and execute a structured GIS-based project
6. Create new geospatial datasets and edit existing datasets
7. Utilize geoprocessing tools to transform geospatial datasets into new ones

Planning Accreditation Board (PAB) Knowledge Components

This course partially covers the following PAB Knowledge Components:

2b) Written, Oral and Graphic Communication: ability to prepare clear, accurate and compelling text, graphics and maps for use in documents and presentations.

2c) Quantitative and Qualitative Methods: data collection, analysis and modeling tools for forecasting, policy analysis, and design of projects and plans.

A complete list of the PAB Knowledge Components can be found at <https://www.sjsu.edu/urbanplanning/graduate-programs/masters-in-urban-planning/pab-knowledge.php> (accessed January 20, 2025)

Required Course Textbook

Understanding GIS, An ArcGIS Pro Project Workbook is required and will serve as a reference throughout the course. The textbook provides detailed, step-by-step instructions in the use of ArcGIS Pro for a multifaceted urban planning analysis. The textbook is available via Canvas with permission from the authors. **You do not need to purchase the textbook.** Please do **not** purchase an earlier version of the book.

Required Software

ArcGIS Pro is required of all students who choose to complete coursework off campus. This software will be available for download from Canvas. Additionally, the university's eCampus office will provide each student with an ArcGIS Online account to maximize use of the software.

Please note that ArcGIS Pro only runs on the **Windows** operating system. In order to run ArcGIS Pro in Windows on a Mac, virtualization software is needed (in Canvas Discussions I added some tips for running ArcGIS Pro on a Mac.) You are responsible for installing and maintaining your software on a personal computer and for properly following Esri's installation instructions.

It is HIGHLY recommended that you check your personal computer to see if it meets the minimum standards to run **ArcGIS Pro 3.4**. Visit [esri.com](https://pro.arcgis.com/en/pro-app/latest/get-started/arcgis-pro-system-requirements.htm) for the standards:

<https://pro.arcgis.com/en/pro-app/latest/get-started/arcgis-pro-system-requirements.htm>

Recommended Course Readings and Videos

See Canvas for several recommended readings and videos on a variety of topics, including geodesign, open-source GIS platforms, and techniques for designing professional-looking maps. These topics will enhance your experience in this course.

Fundamentals for Success in this Course

I will make every effort to help you succeed in this course so that you can use ArcGIS Pro confidently and successfully in your future career endeavors. Naturally, it is your responsibility to complete all assignments and to take advantage of the many learning opportunities this semester. Here are some tips to help you succeed this semester:

Maintain a fast pace: This will be a fast-moving and technologically advanced course, so concepts and instructions will be explained as clearly as possible. If you wish to evaluate your readiness for this course at the outset, please see me as soon as possible. There will be numerous, detailed, and occasionally overlapping assignments – please prepare for this from the outset.

Computer competencies: Competence with the Windows operating system is expected, including the storing, copying and management of multiple data types; managing multiple windows and applications; and techniques for saving work frequently. Dealing with computer problems warrants a sense of humor, too!

Enjoyment of Learning: A strong motivation to learn, explore and have fun with computer applications is a nice trait to embrace in this course.

Seek Help Effectively: Since GIS practitioners and urban planners are problem-solvers at their core, it is important that you adopt a ‘problem-solving mindset’ in this course. Asking for assistance this semester is encouraged and signals to me that you are engaged in your work, motivated by excellence, and effectively challenged by the assignments. Asking for help will never be perceived as a liability in my class. However, when seeking assistance, you must (1) clearly communicate the problem and (2) demonstrate that you have attempted to solve the problem on your own and are ready to describe your attempts.

Also, I am very happy to help you with your work outside of the classroom during office hours or via email. If we work together via email, it is vital that you send me as much information as possible to help diagnose the problem. It is not sufficient to write to me and vaguely state, “I can’t get this to work” and expect useful assistance without also including relevant screen captures and a description of the solution steps you’ve tried. In general, I will be very responsive to queries that meet these criteria and much less so for “lazy queries”, which I will be less inclined to address quickly. This approach mirrors professional practice since supervisors expect valued employees to be proactive in solving problems.

Focus and Respect: I fully understand the temptations and distractions we all face today with our phones vying for our attention. Please turn off or mute your phone during class, and note that lab computers may only be used for class exercises during the class period. If you have to "get something else done" during the class period, step outside and do it elsewhere so as not to distract me or your peers.

Professional Conduct: I conduct this course in a manner that mirrors professional practice in order to help you develop valuable workplace skills. Let’s all be in agreement that certain standards will apply, as listed in the two sections below.

Instructor Responsibilities

- To create a physically and intellectually safe and stimulating environment for learning
- To assist students as much as possible with their individual and collective learning goals
- To help resolve conflicts that hinder learning by answering student questions clearly and promptly, or to research answers and reply to the student as soon as possible
- To treat students with respect and kindness, using encouragement and humor to foster learning
- To arrive prepared and organized, with clear learning objectives and a schedule for each class period
- To evaluate and grade student work fairly and accurately while providing constructive feedback

Student Responsibilities

- To attend each class session and to arrive punctually, bringing all needed materials
- To treat other students and the instructor with absolute respect, supporting fellow students whenever possible with their learning objectives, and minimizing distractions in class
- To complete all assignments on time and professionally according to syllabus requirements
- To fully read and understand all aspects of the syllabus and to carry out the requirements herein
- To actively and consistently participate in class discussions and question-and-answer sessions
- To demonstrate self-reliance and self-direction in setting and completing learning objectives
- To accept responsibility for working collaboratively in the learning process

Course Assignments and Grading Policy

Your grade for the course will be based on the following assignments and other components. All relevant materials and assignment details will be on Canvas.

Assignment Number and Description	Percentage of Total Grade	Course Learning Objective(s) Addressed
Module 1: “Going Places with Spatial Analysis” Esri Mini-Course	30%	
1 – Geography Matters	5%	2
2 – Understanding and comparing places	5%	2
3 – Determining how places are related	5%	2
4 – Finding the best locations and paths	5%	2
5 – Detecting and quantifying patterns	5%	2
6 – Making predictions	5%	2
Module 2: Using ArcGIS for a Los Angeles River Planning Project (Textbook)	40%	
7 – Textbook Chapters 1-2 and supplemental exercises	10%	1-7
8 – Textbook Chapters 3-5 and supplemental exercises	10%	1-7
9 – Textbook Chapters 6-7 and supplemental exercises	10%	1-7
10 – Textbook Chapters 8-9 and supplemental exercises	10%	1-7
Module 3: Independent Final Project	25%	
11 – Independent final project: methodological report and findings,		

Consistently Active Engagement

Consistent, active, well-prepared, and measurable engagement in lectures and reading discussions, peer support tasks, and presentations in class.

5%

Assignments 1 through 6: Working independently, you will complete six online modules as part of an Esri-designed course called “Going Places with Spatial Analysis.” The course will include videos, exercises using ArcGIS Pro and other tools, and quizzes. For each module, you will document your findings using an ArcGIS StoryMap that you create and add onto while completing each module.

Assignment 7 focuses on topics from chapters 1 and 2 of the textbook. Students will learn professional techniques for managing GIS project workflows and articulating a GIS-based problem. Other topics will cover exploratory analysis techniques and best practices for evaluating geospatial data. Additional supplemental material prepared by the instructor will reinforce the skills covered in these chapters. Essential ArcMap Pro tools will be covered, along with steps for creating thematic maps. This assignment will feature skills used by professional urban planners, thereby building valuable workplace-ready skills.

Assignment 8 focuses on topics from chapters 3, 4 and 5 of the textbook. This includes projections and coordinate systems, shapefile and geodatabase management, preparing data for geospatial analysis, and editing/creating new geospatial data. Additional supplemental material prepared by the instructor will reinforce the skills covered in these chapters.

Assignment 9 focuses on topics from chapters 6 and 7 of the textbook. This includes steps for conducting a proper geospatial analysis, selecting suitable map features for the study’s objectives, evaluation of preliminary results, commonly used geoprocessing tools, and ModelBuilder. Additional supplemental material prepared by the instructor will reinforce the skills covered in these chapters.

Assignment 10 includes material from chapters 8 and 9 of the textbook and will cover steps for presenting analysis findings in a professional manner and sharing results via ArcGIS Online. Additional supplemental material prepared by the instructor will reinforce the skills covered in chapters 8 and 9. The principles of creating professional-looking maps for urban planning purposes will also be covered.

Assignment 11 involves the conceptualization, development, and execution of an independent GIS project. Tasks include preparing draft and final project descriptions, the development of a hand-drawn concept map, and the production of a summary report and poster map. Students will present their project findings to the class on the final day of the course (attendance is required). Completion of Assignment 11 will constitute the professional engagement unit for this course since the tasks will mirror the process by which urban planners with GIS skills undertake a professional GIS project.

Class Participation: students will write on their perceived level of engagement in the course material over the span of the semester. The instructor will consider these remarks and supplement with them with his own observations to calculate a grade ranging from 1 (minimal participation) to 5 (superior participation). Students will submit a short written report at the end of the semester as a grading component.

Calculation of Final Course Letter Grade

I first convert the letter grade for each assignment to a number using this scale:

- **Exceptional work: A+ (4.33), A/A+ (4.17), A (4), A/A- (3.85), A- (3.67)**
- **Above average work: A-/B+ (3.5), B+ (3.33), B/B+ (3.17), B (3), B/B- (2.85), B- (2.67)**
- **Satisfactory work: B-/C+ (2.5), C+ (2.33), C/C+ (2.17), C (2), C/C- (1.85), C- (1.67)**
- **Below average work: C-/D+ (1.5), D+ (1.33), D/D+ (1.17), D (1), D/D- (0.85), D- (0.67)**
- **Unacceptable or missing work: F (0)**

I then multiply the numerical values by the weighted value of each assignment (see table on pages 5-6). The resulting products are summed at the end of the semester to calculate the final course grade:

- **Outstanding: A+ (> 4.00)**
- **Exceptional: A (3.85 – 4.00), A- (3.50-3.84)**
- **Above average: B+ (3.17-3.49), B (2.85 – 3.16), B- (2.50-2.84)**
- **Satisfactory: C+ (2.17-2.49), C (1.85 – 2.16), C- (1.50-1.84)**
- **Below average: D+ (1.17-1.49), D (0.85 – 1.16), D- (0.50-0.84)**
- **Unacceptable: F (0-0.49)**

Please read the “URBP-295 Grading Standards” document on Canvas for more details about how I will evaluate your performance in this course.

This grading scheme will not always be followed strictly since upward adjustment of the final course grade will be made if performance on one activity is an outlier (e.g. exceptionally low) or if the pattern of scores shows a significant improvement over time. If such adjustments are made, they usually result in about a half-letter grade improvement. Students are encouraged to meet privately with me early in the semester to discuss expectations.

Other Grading and Assignment Issues

I understand that grades are important to students on both a personal and professional level. They are a measure of your achievements in class and your progress towards meeting the course learning objectives. I also understand that there tends to be a great deal of “grade anxiety” in a university setting. The best way that I can help students with these matters is to be as clear as possible about grading criteria and weightings in this syllabus, so that you can plan ahead.

Please understand that I am a very thoughtful, careful, and fair grader of student assignments and it is a responsibility that I do not take lightly. You are encouraged to review your graded assignments with me at any time to discuss my comments and suggestions for improvement.

I’ve been called a “tough grader”, and it’s true! High grades must be earned and all grades reflect my comprehensive estimation of each student’s effort, just as our efforts in a professional work environment are judged accordingly and considered by supervisors for promotions and pay raises. For example, I reserve a grade of “A” only for **exceptional** work, as a way of honoring students who go “above and beyond” when completing course assignments. After all, the strict definition of an “A” grade is “exceptional”.... not “average” (that’s a C) or even “above average” (that’s a B).

Opportunities for extra credit will be explained in individual assignments posted to Canvas.

Final Examination or Evaluation

Assignment 11 – the independent final project – will constitute the final examination since it will require application of skills covered in the previous assignments.

Course Workload

Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of forty-five hours over the length of the course (normally 3 hours per unit per week with 1 of the hours used for lecture) for instruction or preparation/studying or course related activities including but not limited to internships, labs, clinical practica.

Because this is a four-unit class, you can expect to spend a minimum of nine hours per week in addition to time spent in class and on scheduled tutorials or activities. Special projects or assignments may require additional work for the course. Careful time management will help you keep up with readings and assignments and enable you to be successful in all of your courses.

Participation in Class and Attendance

Student participation in class discussions is a vital component of this course and students should make every attempt to attend all classes and actively participate in discussions. In cases where a student misses a significant number of lectures or does not actively participate in discussions, this will impact the final course grade. According to University policy F69-24, "Students should attend all meetings of their classes, not only because they are responsible for material discussed therein, but because active participation is frequently essential to ensure maximum benefit for all members of the class. Attendance per se shall not be used as a criterion for grading."

Completing Assignments on Time and Professionally

Assignments are due at the date and time specified in Canvas and in this syllabus. In only rare instances will late assignments be accepted, as described below. Late assignments will receive a one-half letter grade deduction for each day an assignment is late. For example, if the assignment would normally receive a grade of "B" but is submitted one day late, it will receive a final grade of "B-minus"; after two days late it will receive a grade of "C+".

I realize that life happens. If you expect not to be able to complete an assignment on time, it is important for you to do two things:

1. Contact me **at least 24 hours prior to the due date** and, if applicable, the other students on your team. If you do not communicate an anticipated late assignment within this timeframe, the grade reduction standards above will apply.
2. Provide a **date and time** by which the late assignment will be submitted. If you do not communicate an anticipated late assignment within this timeframe or if the late assignment is not received on the date promised, the assignment will begin losing points for every day it is late, as described above. If submission of the assignment continues to be delayed, a final grade of 50 is likely.

A maximum of two late assignments (or parts of assignments) that adhere to this policy will be accepted; all subsequent late assignments will receive an automatic grade of 50. Sorry, no exceptions to these policies will be granted, in fairness to the majority of students who submit their assignments on time.

Since this course focuses on the development of professional skills used by urban planners, the presentation of submitted materials will be considered as part of the assignment's grade. All assignments must include the student's name, date, course number, assignment number and other items as directed by the instructor. Neatness, clarity and organization will influence your grade.

Assignments not meeting these fundamental practices of professional presentation will generally receive a reduction in the grade.

University Policies

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs' [Syllabus Information web page](http://www.sjsu.edu/gup/syllabusinfo/) at <http://www.sjsu.edu/gup/syllabusinfo/>

Plagiarism and Citing Sources Properly

Plagiarism is the use of someone else's language, images, data, or ideas without proper attribution. It is a very serious offense both in the university and in your professional work. In essence, plagiarism is both theft and lying: you have stolen someone else's ideas, and then lied by implying that they are your own.

Plagiarism will lead to grade penalties and a record filed with the Office of Student Conduct and Ethical Development. In severe cases, students may also fail the course or even be expelled from the university.

If you are unsure what constitutes plagiarism, it is your responsibility to make sure you clarify the issues before you hand in draft or final work.

Learning when to cite a source and when not to is an art, not a science. However, here are some common examples of plagiarism that you should be careful to avoid:

- Using a sentence (or even a part of a sentence) that someone else wrote without identifying the language as a quote by putting the text in quote marks and referencing the source.
- Paraphrasing somebody else's theory or idea without reference to the source.
- Using a picture or table from a webpage or book without reference the source.
- Using data some other person or organization has collected without referencing the source.

The SJSU MLK Library provides a short (20 minutes) and informative plagiarism tutorial. The MUP faculty highly encourages all students to complete it. Details are here:

<https://libguides.sjsu.edu/c.php?g=853661&p=6111789>

If you still have questions, feel free to talk to me. There is nothing wrong with asking for help, whereas even unintentional plagiarism can be a serious offense.

Citation style

It is important to properly cite any references you use in your assignments. The Department of Urban and Regional Planning uses Kate Turabian's *A Manual for Writers of Research Papers, Theses, and Dissertations*, 9th edition (University of Chicago Press, 2018). Copies are available in the SJSU King Library. Additionally, the book is relatively inexpensive, and you may wish to purchase a copy.

Please note that Turabian's book describes two systems for referencing materials: (1) "notes" (footnotes or endnotes), plus a corresponding bibliography, and (2) in-text parenthetical references, plus a corresponding reference list. **In this class, students should use the "notes" style** since I feel that it creates a less visually distracting experience for your reader than the parenthetical-reference style.

Library Liaison

The SJSU Library Liaison for the Urban and Regional Planning Department is Ms. Lauren DeCelle. If you have questions, you can contact her at lauren.decelle@sjsu.edu.

About Me: Rick Kos, AICP

I am very much looking forward to working with you this semester and expect that you will learn quite a bit in our few months together. We'll have some fun along the way, too. My goal is to teach you a number of entry-level GIS skills clearly, with minimal jargon and maximum time using the software to help you remain competitive in the labor market.

My formal training is in environmental planning and urban design (B.S., Rutgers University, 1985) as well as regional planning and New Urbanism (Masters, University of North Carolina at Chapel Hill, 1993). Throughout my career using GIS, I have never strayed far from my roots in urban and regional planning and this combination of experience is what I am excited to share with you. I take pride in providing personal, one-on-one attention to the needs of my students.

In the late 1980s, I worked as a planner in Middlesex County, New Jersey, reviewing subdivision and site plan proposals for compliance with county regulations. In the 1990s, I served two rapidly growing North Carolina municipalities in a dual role as town planner and GIS coordinator (the latter being a role I created for both towns), so I am equally conversant in the language of both disciplines. From 1996 - 2000, I served as Senior Town Planner for Huntersville, North Carolina - the fastest-growing town of its size in the state at the time. The New Urbanist principles mandated by the Town's development regulations applied to both greenfield and infill sites. Since the regulations were design-based (i.e. non-Euclidean), they required me to make frequent subjective judgments on the visual qualities of streets, the orientation of proposed buildings to public spaces, and the relationship of buildings and land uses to one another. I thoroughly enjoyed defending the principles of traditional town planning, often to developers and citizens that were not particularly receptive, at first, to deviations from the conventional suburban planning model.

After relocating to the Bay Area in 2000, I worked with the Metropolitan Transportation Commission in Oakland as a GIS Analyst. The Bay Area Lifeline Transportation Map that I completed for MTC was chosen from among thousands of entries for inclusion in Esri's *2003 Map Book*. This annual publication showcases innovative uses of Esri's GIS software to solve real-world problems. The Lifeline Map locates disadvantaged neighborhoods and thousands of geocoded essential destinations (e.g. grocery stores, daycare centers, clinics) within the nine county region, along with existing public transit services. The spatial analyses enabled by this mapping work allowed transportation planners to locate gaps in transit service so that decision-makers could direct funding to alter bus schedules, connections and routing for improved neighborhood connectivity.

From 2003 to 2007 I served as GIS Manager for Design, Community & Environment, a 45-person planning and design firm in Berkeley. I managed all aspects of the firm's GIS practice and took great pride in keeping hundreds of data layers organized across multiple projects, ensuring that the firm's metadata was up-to-date, training staff to use ArcGIS and ArcCatalog, and managing the production of hundreds of maps for General Plans and EIRs throughout California.

Additionally, I have co-authored a book titled *GIS for Economic Development* with Professor Mike Pogodzinski of the SJSU Economics Department. The book was published in 2012 by Esri Press.

I also engage in freelance GIS projects through my sole proprietorship. For example, I recently developed an online map of groundwater pollution in San Francisco's Marina district. Other clients include Mobility Planners, LLC (bus transit mapping); the Alameda County Water District (staff training); McKenzie & Albritton, LLC (maps related to telecommunications facility siting); BayGeo (managing the Bay Area GIS Education Center); Perkins + Will (staff training), and Opticos Design (land use mapping and analysis).

Let's go, GIS-ers!

URBP-278: INTRODUCTION TO GIS FOR URBAN PLANNING

SPRING 2025 COURSE SCHEDULE

This schedule describes the general approach we will take this semester, but please bear in mind that specific details are subject to change with reasonable notice. I will communicate changes via email and verbally in class. As denoted with blue-colored headings, the course is divided into three modules:

Date	Topic	Assignment(s) Due
Module 1: “Going Places with Spatial Analysis” Esri Mini-Course		
Jan. 23	<u>Getting Started and Organized:</u> <ul style="list-style-type: none"> - Course and syllabus overview - What is GIS and ArcGIS Pro? - How are today’s urban planners using GIS? - What geospatial skills are employers looking for? - Overview: “Going Places with Spatial Analysis” course topics 	
Jan. 30	<ul style="list-style-type: none"> - Guest lecture: prospective Dept. of Urban & Regional Planning faculty member - Overview of “Going Places with Spatial Analysis” Module 1 	
Feb. 06	<ul style="list-style-type: none"> - Discuss Assignment 1 findings - In-class practice exercises - Overview of “Going Places with Spatial Analysis” Module 2 	Assignment 1 Due: Mini-course module 1 (Geography Matters)
Feb. 13	<ul style="list-style-type: none"> - Discuss Assignment 2 findings - In-class practice exercises - Overview of “Going Places with Spatial Analysis” Module 3 	Assignment 2 Due: Mini-course module 2 (Understanding and comparing places)
Feb. 20	<ul style="list-style-type: none"> - Discuss Assignment 3 findings - In-class practice exercises - Overview of “Going Places with Spatial Analysis” Module 4 - Henri Brillon presents his geospatial research projects 	Assignment 3 Due: Mini-course module 3 (Determining how places are related)
Feb. 27	<ul style="list-style-type: none"> - Discuss Assignment 4 findings - In-class practice exercises - Overview of “Going Places with Spatial Analysis” Module 5 	Assignment 4 Due: Mini-course module 4 (Finding the best locations and paths)
Mar. 06	<ul style="list-style-type: none"> - Discuss Assignment 5 findings - In-class practice exercises - Overview of “Going Places with Spatial Analysis” Module 6 - Guest speaker: Fran Lopez (SJSU MUP alumnus) 	Assignment 5 Due: Mini-course module 5 (Detecting and quantifying patterns)
Mar. 13	<ul style="list-style-type: none"> - Discuss Assignment 6 findings - Overview of L.A. River textbook project and Assignments 7-10 - “New life for old maps” in-class exercise (time permitting) - Guest speaker: Stephen Granger-Bevan (SJSU MUP alumnus) 	Assignment 6 Due: Mini-course module 6 (Making predictions)

Date	Topic	Assignment(s) Due
Module 2: Using ArcGIS for a Los Angeles River Planning Project (Textbook) Module 3: Independent Final Project (April 17 – May 15)		
Mar. 20	Focus on skills from textbook Chapter 1: Framing the Los Angeles River problem; exploring the study area; listing data requirements; examining data; choosing relevant data; and Chapter 2: examining metadata, defining site suitability criteria. Guest speaker: Ann McMillan (SJSU ENVIS graduate student)	
Mar. 27	Review Assignment 7 findings Focus on skills from textbook Chapter 3 and 4: symbolizing map layers, measuring distances, coordinate systems and projections, commonly used geoprocessing tools; and Chapter 5: editing and creating map features and attribute tables.	Assignment 7 (Textbook Chapters 1-2 and supplemental exercises)
Apr. 03	No class today – spring break!	
Apr. 10	Review Assignment 8 findings Focus on skills from textbook Chapter 6: further exploration of geoprocessing tools; and Chapter 7: working with ModelBuilder to visualize and preserve geoprocessing workflows.	Assignment 8 (Textbook Chapters 3-5 and supplemental exercises)
Apr. 17	Open work session: students meet individually with Rick and Henri on their two final project (Assignment 11) project proposals	Assignment 11 (Part 1) draft of two independent project proposals
Apr. 24	Review Assignment 9 findings Focus on skills from textbook Chapter 8: principles of professional map design, critiquing existing maps; and Chapter 9: moving from ArcGIS Pro to ArcGIS Online, creating StoryMaps.	Assignment 11 (Parts 2 & 3) final course project description and hand-drawn concept map Assignment 9 (Textbook Chapters 6-7 and supplemental exercises)
May 1	Open work session: students meet individually with Rick and Henri on their final project (Assignment 11) progress.	
May 8	Review Assignment 10 findings Open work session: students meet individually with Rick and Henri on their final project (Assignment 11) progress.	Assignment 10 (Textbook Chapters 8-9 and supplemental exercises)
May 15	Final Class Meeting (attendance required) - Final Project Presentations - Final Project Report Due - Final Project Poster Map	Assignment 11 (Part 4) final report, final poster, class presentation Class Participation <i>(upload reflections on Canvas)</i>